

Amendments to the Specification:

Please replace paragraph [0015] on page 4, with the following amended paragraph:

A balloon catheter capable of both fast and simple guidewire and catheter exchange is particularly advantageous. A catheter designed to address this need is sold by Medtronic Vascular, Inc. of Santa Rosa, Calif. under the trademarks MULTI-EXCHANGE, ZIPPER MX, ZIPPER, MX and/or MXII (hereinafter referred to as the “MX catheter”). An MX catheter is disclosed in U.S. Pat. No. 4,988,356 to Crittenden et al.; U.S. Pat. No. 6,800,065 to Duane et al. ~~eo-pending U.S. patent application Ser. No. 10/116,234, filed Apr. 4, 2002;~~ U.S. Pat. Appl. Publ. No. 2004/0059369 to Duffy et al. ~~eo-pending U.S. patent application Ser. No. 10/251,578, filed Sep. 18, 2002;~~ U.S. Pat. No. 6,905,477 to McDonnell et al. ~~eo-pending U.S. patent application Ser. No. 10/251,477, filed Sep. 20, 2002;~~ U.S. Pat. Appl. Publ. No. 2004/0260329 to Gribbons et al. ~~eo-pending U.S. patent application Ser. No. 10/722,191, filed Nov. 24, 2003;~~ and U.S. Pat. No. 6,893,417 to Gribbons et al. ~~eo-pending U.S. patent application Ser. No. 10/720,535, filed Nov. 24, 2003,~~ all of which are incorporated by reference in their entirety herein.

Please replace paragraph [0018] on page 5, with the following amended paragraph:

A clinician may wish to perform fast and simple guidewire and catheter exchanges while maintaining a guidewire ~~guidewire~~ fully within a catheter as in a conventional OTW catheter. An alternative form of guide member that allows that capability (hereinafter referred to as the “grabber”) is disclosed in U.S. Pat. Appl. Publ. No. 2004/0039372 to Carmody ~~eo-pending U.S. patent application Ser. No. 10/226,789, filed Aug. 21, 2002,~~ that is incorporated by reference in its entirety herein. The grabber is similar to the guide member described above in that it is slidably coupled to a MX catheter shaft. However, the grabber does not allow a guidewire to enter or exit the MX catheter anywhere along the length of the catheter shaft. Instead, the grabber allows a clinician to apply a clamping force on a guidewire within the catheter shaft allowing him to directly manipulate the position of the guidewire within the catheter shaft.

Please insert the following two paragraphs after paragraph [0044] on page 9:

FIG. 16 is schematic of an exemplary catheter, guide wire and guide member in which embodiments of the present invention may be implemented.

FIG. 17 is a schematic of a longitudinal section of the guide member of FIG. 16 taken along line 17-17.

Please insert the following two paragraphs after paragraph [0045] on page 10:

FIG. 16 is a schematic representation of an MX catheter 1600 that may be made in accordance with embodiments of the present invention. MX catheter 1600 includes a guide member 1650 slidably mounted thereon. Guidewire 1655 is illustrated as extending through guide member 1650. Guide member 1650 serves as a juncture through which catheter 1600 and guidewire 1655 may be merged or separated so that the proximal portion of guidewire 1655, which extends proximally to the left of guide member 1650 as seen in FIG. 16, is separated from catheter 1600 and the distal portion of guidewire 1655, which extends distally to the right of guide member 1650 as seen in FIG. 16, is slidably disposed within a guidewire lumen of catheter 1600, such as guidewire lumen 230 shown in the embodiments of FIGS. 2, 3A, 3B, and 4A-4C. Catheter 1600 includes a proximal shaft 1602 and a distal shaft 1604 that may be made in accordance with any of the embodiments shown and hereinafter described with reference to FIGS. 1-15.

FIG. 17 is a schematic of a longitudinal section of guide member 1650 of FIG. 16 taken along line 17-17 with guidewire 1655 and catheter 1600 removed. Guide member 1650 includes a guidewire passageway 1752 with a proximal opening 1754 through which guidewire 1655 traverses into and out of catheter 1600 and a catheter passageway 1758 through which catheter 1600 may be slidably disposed. Guide member 1650 includes a keel portion 1756 adapted to align catheter 1600 within catheter passageway 1758. Keel portion 1756 slidably engages a longitudinal cut in the proximal shaft of catheter 1600, such as

longitudinal cut 134 shown in the embodiments of FIGS. 2, 3A, 3B, and 4A-4C, to open the longitudinal cut at the appropriate location for allowing transverse passage of guidewire 1655 into and out of the guidewire lumen of catheter 1600. Guide member 1650 is exemplary and may instead be any of the guide members shown and described in U.S. Pat. No. 6,800,065 to Duane et al., U.S. Pat. Appl. Publ. No. 2004/0059369 to Duffy et al., U.S. Pat. No. 6,905,477 to McDonnell et al., U.S. Pat. Appl. Publ. No. 2004/0260329 to Gribbons et al. and U.S. Pat. No. 6,893,417 to Gribbons et al., which were previously incorporated by reference herein.

Please replace paragraph [0080] on page 19, with the following amended paragraph:

With reference to FIG. 1, the guide member (~~not shown~~) of an MX catheter, such as guide member 1650 of MX catheter 1600 shown in FIG. 16, opens longitudinal cut 134 and leads the guidewire out of guidewire lumen 230. However, in order that catheter shaft 100 is easily exchanged, the guide member must move distally far enough along the catheter shaft 100 that the operator can reach the guidewire distally of catheter shaft 100 while holding a proximal portion of the guidewire. Thus, distal end 110 of proximal shaft 102_a ~~[[()]]~~i.e., where longitudinal cut 134 ends_a~~[[()]]~~ must be sufficiently close to the distal end of catheter shaft 100 for the MX catheter function to operate. However, a-closed-loop spiral-helix as a transition-means, as described in each of the previous embodiments, is well suited for use at any location with OTW, fixed wire and most RX catheters.